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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,651	11/17/2003	Kersten Anne Terry	2002U016 US	5370

7390

06/07/2004

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EXAMINER

TESKIN, FRED M

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.	Applicant(s)
10/715,651	TERRY ET AL
Examiner	Art Unit
Fred M Taskin	1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (38 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(s).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 021904.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

Claims 1-19 are currently pending and under examination herein.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP 608.01(o). Correction of the following is required: the lack of proper antecedent basis for the subject matter of the phrase "establishing optimal conditions in the reactor ..." as recited in claims 1 and 14. The most relevant portions of the specification provide for "establishing target conditions for the product to be produced ..." (see page 3, ll. 11-13 and page 4, ll. 16-17); no reference to "optimal" reactor conditions is apparent. Clarification and appropriate correction are required.

Claim 12 is objected to because of the following informalities: the word -to- has been omitted after "equal" in the first line. Appropriate correction is required.

Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, the following grounds for indefiniteness apply to the indicated claims.

(A) The term "optimal" in claims 1 and 14 is a relative term which renders the claims indefinite. The term is relative in that what constitutes "optimal" reactor conditions will vary as a function of not only the particular type of mixed catalyst system (claim 1) or silyl-chromate catalyst system (claim 14) used in the reactor, but the

type/grade of polymer being produced and its intended application. The scope of the term thus depends on parameters not defined in the claims, and the specification does not provide a standard for ascertaining what reactor conditions are intended to qualify as "optimal" for each catalyst system (metallocene and silyl-chromate) being used in the claimed process. In fact, while the specification generally refers to establishing target conditions within the reactor for the product to be produced (see pp. 3-4), no specific reactor conditions are identified as "optimal" for each catalyst system. Indeed, on pages 7 and 8, it is stated that "appropriate conditions are achieved" before the feed of mixed catalyst or chrome-based catalyst is begun; but apart from reactor temperature, no specific conditions are mentioned in the subsequent discussion. Similarly, in the two working examples, the only reactor conditions reported in connection with transition to silyl-chromate or mixed catalyst system are reactor temperature and hydrogen concentration (see page 32, ll. 15-20 and page 35, ll. 19+). Accordingly, one of ordinary skill in the art would not be reasonably apprised of the scope of the invention, i.e., the scope of reactor conditions intended to qualify as "optimal" in the claimed process.

(B) The expression "increasing reactor temperature to 105°C [or 95°C]" in claims 1 and 14 creates confusion in the absence of any earlier reference to temperature in the preceding process steps. It is unclear whether the expression is intended to indirectly limit temperature in each of the earlier steps to a value below 105°C or 95°C, or whether only the preceding step of "introducing the second catalyst system into the reactor" must be performed at such lower temperature. According to the specification, in step a) the reactor temperature is allowed to drop to or below 80°C (page 3, l. 6 and page 4, l. 11),

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but no corresponding temperature constraint is found in the claims. Thus, there is confusion as to how this expression serves to limit temperature in the earlier step(s) of the claimed process.

C) Claim 5 provides the limitation to "the partial pressure of ethylene". There is inadequate antecedent basis for this limitation in the claims; i.e., there is no precedent for "ethylene" in claims 5/2/1.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Zilker, Jr., et al is cited as illustrative of analogous art relating to a process for transitioning from a first sticky polymer to a second sticky polymer in a gas phase fluidized bed polymerization reactor.

Samson is pertinent to a procedure for transitioning from a late transition metal catalyst to a catalyst incompatible therewith in a polymerization process (note page 1, parag. [0008] *et seq.*).

Williams et al is pertinent to the direct conversion of a polymerization reaction catalyzed by a Ziegler-type catalyst to one catalyzed by a chromium-based catalyst.

Claims 1-19 are deemed to avoid the prior art of record. Examiner has not, as of the date of this Office action, located or identified any prior art document(s) that can be used to render the polymerization reaction transition process defined by said claims anticipated or obvious to a person having ordinary skill in the art.


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Any inquiry concerning this communication should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMTeskin/06-02-04



FRED TESKIN  
PRIMARY EXAMINER  
1713